

CLAIMS

1. Friction clutch, particularly for a motor vehicle, of the type comprising at least one damper (22) having:

- 5 - rotating input (24) and output (26) elements,
- elastic elements with a circumferential effect carried by first (28) and second (30) guide washers which are connected in a rotationally fixed manner to a first of the input (24) and
10 output (26) elements and by a web (36) connected in a rotationally fixed manner to a second of the input (24) and output (26) elements,
- friction means (44), which are activated by relative angular displacement of the guide
15 washers (28, 30) and of the web (36) and which comprise a friction element (46) capable of being coupled to the web (36) via complementary circumferential stops, referred to as coupling stops (48A, 48B), which interact only when this
20 web (36) is displaced angularly in a predetermined direction with respect to the guide washers (28, 30),

characterized in that the complementary coupling stops (48A, 48B) are provided on the friction element (46) and
25 an element (50) that is distinct from the web (36) and from this friction element (46) and is connected in a rotationally fixed manner to the web (36), said element being referred to as the attached element (50).

- 30 2. Clutch according to Claim 1, characterized in that the coupling stops (48B) of the attached element (50) are provided on axial protrusions (58) which each have a free end (59) designed to cooperate with the first guide washer (28), the attached element (50) thus forming an
35 axial spacer between the web (36) and the first guide washer (28).

3. Clutch according to Claim 1 or 2, characterized in that the web (36) comprises openings (42) for housing and supporting the elastic elements with a circumferential effect, the attached element (50) being coupled in rotation to the web (36) by means of complementary axial fitting means (53) provided on the attached element (50) and at least one angular sector (54) of the web (36) which separates two openings (42) of this web (36), referred to as the intermediate sector (54).

4. Clutch according to Claim 3, characterized in that the complementary axial fitting means (53) comprise at least one axial pin (56) which is provided on the attached element (50) and is fitted in a complementary fitting orifice (57) provided in the intermediate sector (54).

5. Clutch according to any one of the preceding claims, characterized in that the attached element (50) is made of plastic or metal.

6. Clutch according to any one of the preceding claims, characterized in that the friction element (46) comprises at least one driving stop (60) able to cooperate with a complementary driving stop (62) connected to the guide washers (28, 30).

7. Clutch according to Claim 6, characterized in that the complementary driving stop (62) connected to the guide washers (28, 30) is formed by a seat (63) for the elastic element with a circumferential effect.

8. Clutch according to any one of Claims 1 to 7, characterized in that the input element (24) is formed by a friction disc (24) which is coupled, for example, to a crankshaft of an engine, the friction element (46) being free axially with respect to the web (36) and being inserted axially between the first guide washer (28) and

the friction disc (24) so as to cooperate with integral complementary friction surfaces of the first guide washer (28) and the friction disc (24).

5 9. Clutch according to Claim 8, characterized in that the integral complementary friction surfaces of the friction disc (24) are provided on tabs (P) with an axial elastic effect which extend the friction disc (24) in the essentially radial direction towards its centre.

10 10. Clutch according to Claim 9, characterized in that the tabs (P) each have a free end which is extended circumferentially by two opposite branches (P1, P2) bearing the friction surfaces.

15 11. Clutch according to Claim 8, characterized in that the integral complementary friction surfaces of the friction disc (24) are provided on an attached washer (R) which is connected in rotation to the friction disc (24)
20 by means of tabs (RP) which cooperate with notches (E) of this friction disc.

12. Clutch according to any one of Claims 8 to 11, characterized in that it comprises an elastic element
25 (66) with an axial effect which works in compression between the web (36) and the second friction washer (30).

13. Clutch according to any one of Claims 1 to 7, characterized in that the friction element (46) comprises
30 first (76) and second (78) friction washers which are designed to cooperate respectively with the first (28) and second (30) guide washers, a unidirectional drive washer (51), connected in rotation to the friction washers (76, 78), on which the coupling stops (48A) are
35 provided.

14. Clutch according to Claim 13, characterized in that the unidirectional drive washer (51) is on the one hand

free axially with respect to the web (36) and on the other hand is inserted axially between the friction washers (76, 78).

5 15. Clutch according to Claim 14, characterized in that the first friction washer (76) is free axially with respect to the unidirectional drive washer (51), a first elastic element (80) with an axial effect working in compression between this first friction washer (76) and
10 this unidirectional drive washer (51).

16. Clutch according to Claim 15, characterized in that the web (36) is inserted axially between the unidirectional drive washer (51) and the second friction
15 washer (78), the second friction washer (78) being connected axially to the unidirectional drive washer (51), a second elastic element (82) with an axial effect working in compression between the web (36) and the second friction washer (78).

20 17. Clutch according to any one of Claims 13 to 16 taken in combination with Claim 6, characterized in that the driving stop (60) is provided on the unidirectional drive washer (51).

25 18. Clutch according to any one of the preceding claims, characterized in that the output element (26) is formed by a hub (26) which can be coupled to a gearbox shaft.

30 19. Clutch according to any one of the preceding claims, characterized in that the elastic elements with a circumferential effect are distributed in three openings (40, 42) provided in each of the elements consisting of the guide washers (28, 30) and the web (36).

35 20. Clutch according to any one of the preceding claims, characterized in that the attached element (50) helps to centre the friction element (46).